J. Rock

#12

BIOTECHNOLOGY SYSTEMS BRANCH

RAW SEQUENCE LISTING ERROR REPORT

RUSH

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/728,421 C
Source: OIPE
Date Processed by STIC: 6-3-02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO **REDUCE** ERRORED SEQUENCE LISTINGS, **PLEASE** USE THE **CHECKER VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
http://www.uspto.gov/web/offices/pac/checker

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm> , **EFS Submission User Manual** - ePAVE)
2. **U.S. Postal Service:** U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. **Hand Carry directly to:**
   U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
   Or
   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. **Federal Express, United Parcel Service, or other delivery service to:** U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Raw Sequence Listing Error Summary

ERROR DETECTED **SUGGESTED CORRECTION** **SERIAL NUMBER:** 09/728,421C

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1	Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2	Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.
3	Misaligned Amino Numbering	The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4	Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5	Variable Length	Sequence(s)____contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6	PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7	Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8	Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000
9	Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
10	Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
11	Use of <220>	Sequence(s) 5 missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
12	PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

RAW SEQUENCE LISTING DATE: 06/03/2002
PATENT APPLICATION: US/09/728,421C TIME: 13:09:04

Input Set : A:\A-579D.ST25.txt
Output Set: N:\CRF3\06032002\I728421C.raw

```
     3 <110> APPLICANT: Yoshinaga, Steven
     5 <120> TITLE OF INVENTION: Novel Polypeptides Involved in Immune Response
     7 <130> FILE REFERENCE: A-579D
     9 <140> CURRENT APPLICATION NUMBER: 09/728,421C
C--> 10 <141> CURRENT FILING DATE: 2002-05-17
    12 <150> PRIOR APPLICATION NUMBER: PCT/US00/01871
    13 <151> PRIOR FILING DATE: 2000-01-27
    15 <150> PRIOR APPLICATION NUMBER: US 09/264,527
    16 <151> PRIOR FILING DATE: 1999-03-08
    18 <150> PRIOR APPLICATION NUMBER: US 09/244,448
    19 <151> PRIOR FILING DATE: 1999-02-03
    21 <160> NUMBER OF SEQ ID NOS: 35
    23 <170> SOFTWARE: PatentIn version 3.0
    25 <210> SEQ ID NO: 1
    26 <211> LENGTH: 600
    27 <212> TYPE: DNA
    28 <213> ORGANISM: Mus musculus
    30 <220> FEATURE:
    31 <221> NAME/KEY: CDS
    32 <222> LOCATION: (1)..(600)
    34 <400> SEQUENCE: 1
    35 atg aag ccg tac ttc tgc cgt gtc ttt gtc ttc tgc ttc cta atc aga       48
    36 Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
    37 1               5                  10                  15
    39 ctt tta aca gga gaa atc aat ggc tcg gcc gat cat agg atg ttt tca       96
    40 Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
    41             20                  25                  30
    43 ttt cac aat gga ggt gta cag att tct tgt aaa tac cct gag act gtc      144
    44 Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
    45         35                  40                  45
    47 cag cag tta aaa atg cga ttg ttc aga gag aga gaa gtc ctc tgc gaa      192
    48 Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
    49     50                  55                  60
    51 ctc acc aag acc aag gga agc gga aat gcg gtg tcc atc aag aat cca      240
    52 Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
    53 65                  70                  75                  80
    55 atg ctc tgt cta tat cat ctg tca aac aac agc gtc tct ttt ttc cta      288
    56 Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
    57                 85                  90                  95
    59 aac aac cca gac agc tcc cag gga agc tat tac ttc tgc agc ctg tcc      336
    60 Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
    61             100                 105                 110
    63 att ttt gac cca cct cct ttt caa gaa agg aac ctt agt gga gga tat      384
```

RAW SEQUENCE LISTING DATE: 06/03/2002
PATENT APPLICATION: US/09/728,421C TIME: 13:09:04

Input Set : A:\A-579D.ST25.txt
Output Set: N:\CRF3\06032002\I728421C.raw

```
64 Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
65         115                 120                 125
67 ttg cat att tat gaa tcc cag ctc tgc tgc cag ctg aag ctc tgg cta      432
68 Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
69     130                 135                 140
71 ccc gta ggg tgt gca gct ttc gtt gtg gta ctc ctt ttt gga tgc ata      480
72 Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
73 145                 150                 155                 160
75 ctt atc atc tgg ttt tca aaa aag aaa tac gga tcc agt gtg cat gac      528
76 Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
77                 165                 170                 175
79 cct aat agt gaa tac atg ttc atg gcg gca gtc aac aca aac aaa aag      576
80 Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
81             180                 185                 190
83 tct aga ctt gca ggt gtg acc tca                                    600
84 Ser Arg Leu Ala Gly Val Thr Ser
85         195                 200
88 <210> SEQ ID NO: 2
89 <211> LENGTH: 200
90 <212> TYPE: PRT
91 <213> ORGANISM: Mus musculus
93 <400> SEQUENCE: 2
95 Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
96 1               5                  10                  15
99 Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
100             20                  25                  30
103 Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
104         35                  40                  45
107 Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
108     50                  55                  60
111 Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
112 65                  70                  75                  80
115 Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
116                 85                  90                  95
119 Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
120             100                 105                 110
123 Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
124         115                 120                 125
127 Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
128     130                 135                 140
131 Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
132 145                 150                 155                 160
135 Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
136                 165                 170                 175
139 Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
140             180                 185                 190
143 Ser Arg Leu Ala Gly Val Thr Ser
144         195                 200
147 <210> SEQ ID NO: 3
```

RAW SEQUENCE LISTING DATE: 06/03/2002
PATENT APPLICATION: US/09/728,421C TIME: 13:09:04

Input Set : A:\A-579D.ST25.txt
Output Set: N:\CRF3\06032002\I728421C.raw

<211> LENGTH: 200
<212> TYPE: PRT
<213> ORGANISM: Mus musculus
<400> SEQUENCE: 3

```
Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
1               5                  10                  15
Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
            20                  25                  30
Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
        35                  40                  45
Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
    50                  55                  60
Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
65                  70                  75                  80
Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
                85                  90                  95
Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
            100                 105                 110
Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
        115                 120                 125
Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
    130                 135                 140
Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
145                 150                 155                 160
Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
                165                 170                 175
Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
            180                 185                 190
Ser Arg Leu Ala Gly Val Thr Ser
        195                 200
```

<210> SEQ ID NO: 4
<211> LENGTH: 218
<212> TYPE: PRT
<213> ORGANISM: Mus musculus
<400> SEQUENCE: 4

```
Met Thr Leu Arg Leu Leu Phe Leu Ala Leu Asn Phe Phe Ser Val Gln
1               5                  10                  15
Val Thr Glu Asn Lys Ile Leu Val Lys Gln Ser Pro Leu Leu Val Val
            20                  25                  30
Asp Ser Asn Glu Val Ser Leu Ser Cys Arg Tyr Ser Tyr Asn Leu Leu
        35                  40                  45
Ala Lys Glu Phe Arg Ala Ser Leu Tyr Lys Gly Val Asn Ser Asp Val
    50                  55                  60
Glu Val Cys Val Gly Asn Gly Asn Phe Thr Tyr Gln Pro Gln Phe Arg
65                  70                  75                  80
Ser Asn Ala Glu Phe Asn Cys Asp Gly Asp Phe Asp Asn Glu Thr Val
                85                  90                  95
Thr Phe Arg Leu Trp Asn Leu His Val Asn His Thr Asp Ile Tyr Phe
            100                 105                 110
```

RAW SEQUENCE LISTING DATE: 06/03/2002
PATENT APPLICATION: US/09/728,421C TIME: 13:09:04

Input Set : A:\A-579D.ST25.txt
Output Set: N:\CRF3\06032002\I728421C.raw

```
221 Cys Lys Ile Glu Phe Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Arg
222         115                 120                 125
224 Ser Asn Gly Thr Ile Ile His Ile Lys Glu Lys His Leu Cys His Thr
225     130                 135                 140
227 Gln Ser Ser Pro Lys Leu Phe Trp Ala Leu Val Val Val Ala Gly Val
228 145                 150                 155                 160
230 Leu Phe Cys Tyr Gly Leu Leu Val Thr Val Ala Leu Cys Val Ile Trp
231                 165                 170                 175
233 Thr Asn Ser Arg Arg Asn Arg Leu Leu Gln Val Thr Thr Met Asn Met
234             180                 185                 190
236 Thr Pro Arg Arg Pro Gly Leu Thr Arg Lys Pro Tyr Gln Pro Tyr Ala
237         195                 200                 205
239 Pro Ala Arg Asp Phe Ala Ala Tyr Arg Pro
240     210                 215
242 <210> SEQ ID NO: 5
243 <211> LENGTH: 234
244 <212> TYPE: PRT
245 <213> ORGANISM: Artificial Sequence
247 <220> FEATURE:
248 <221> NAME/KEY: misc_feature
249 <222> LOCATION: (1)..(234)
250 <223> OTHER INFORMATION: Xaa is an unspecified amino acid
253 <400> SEQUENCE: 5
W--> 255 Met Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg
256 1               5                   10                  15
W--> 258 Leu Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
259             20                  25                  30
W--> 261 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
262         35                  40                  45
W--> 264 Val Xaa Xaa Ser Cys Xaa Tyr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
265     50                  55                  60
W--> 267 Xaa Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Cys Xaa
268 65                  70                  75                  80
W--> 270 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
271                 85                  90                  95
W--> 273 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asn Xaa Xaa Val Xaa Phe Xaa Leu
274             100                 105                 110
W--> 276 Xaa Asn Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Phe Cys Xaa Xaa Xaa
277         115                 120                 125
W--> 279 Xaa Xaa Xaa Pro Pro Pro Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Gly Xaa
280     130                 135                 140
W--> 282 Xaa Xaa His Ile Xaa Glu Xaa Xaa Leu Cys Xaa Xaa Xaa Xaa Xaa Xaa
283 145                 150                 155                 160
W--> 285 Lys Leu Xaa Trp Xaa Leu Xaa Val Xaa Xaa Xaa Xaa Xaa Phe Xaa Xaa
286                 165                 170                 175
W--> 288 Xaa Xaa Leu Leu Xaa Xaa Xaa Xaa Leu Xaa Xaa Ile Trp Xaa Xaa Xaa
289             180                 185                 190
W--> 291 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa
292         195                 200                 205
```

See item #11 on ERROR Summary SHEET see also, page 7 for more sequence numbers with this problem.

RAW SEQUENCE LISTING DATE: 06/03/2002
PATENT APPLICATION: US/09/728,421C TIME: 13:09:04

Input Set : A:\A-579D.ST25.txt
Output Set: N:\CRF3\06032002\I728421C.raw

```
W--> 294 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg
     295     210                 215                 220
W--> 297 Xaa Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa
     298 225                 230
     300 <210> SEQ ID NO: 6
     301 <211> LENGTH: 966
     302 <212> TYPE: DNA
     303 <213> ORGANISM: Mus musculus
     305 <220> FEATURE:
     306 <221> NAME/KEY: CDS
     307 <222> LOCATION: (1)..(966)
     309 <400> SEQUENCE: 6
     310 atg cag cta aag tgt ccc tgt ttt gtg tcc ttg gga acc agg cag cct       48
     311 Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
     312 1               5                   10                  15
     314 gtt tgg aag aag ctc cat gtt tct agc ggg ttc ttt tct ggt ctt ggt       96
     315 Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
     316             20                  25                  30
     318 ctg ttc ttg ctg ctg ttg agc agc ctc tgt gct gcc tct gca gag act      144
     319 Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
     320         35                  40                  45
     322 gaa gtc ggt gca atg gtg ggc agc aat gtg gtg ctc agc tgc att gac      192
     323 Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
     324     50                  55                  60
     326 ccc cac aga cgc cat ttc aac ttg agt ggt ctg tat gtc tat tgg caa      240
     327 Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
     328 65                  70                  75                  80
     330 atc gaa aac cca gaa gtt tcg gtg act tac tac ctg cct tac aag tct      288
     331 Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
     332                 85                  90                  95
     334 cca ggg atc aat gtg gac agt tcc tac aag aac agg ggc cat ctg tcc      336
     335 Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
     336             100                 105                 110
     338 ctg gac tcc atg aag cag ggt aac ttc tct ctg tac ctg aag aat gtc      384
     339 Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
     340         115                 120                 125
     342 acc cct cag gat acc cag gag ttc aca tgc cgg gta ttt atg aat aca      432
     343 Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
     344     130                 135                 140
     346 gcc aca gag tta gtc aag atc ttg gaa gag gtg gtc agg ctg cgt gtg      480
     347 Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
     348 145                 150                 155                 160
     350 gca gca aac ttc agt aca cct gtc atc agc acc tct gat agc tcc aac      528
     351 Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
     352                 165                 170                 175
     354 ccg ggc cag gaa cgt acc tac acc tgc atg tcc aag aat ggc tac cca      576
     355 Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
     356             180                 185                 190
     358 gag ccc aac ctg tat tgg atc aac aca acg gac aat agc cta ata gac      624
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 06/03/2002
PATENT APPLICATION: US/09/728,421C TIME: 13:09:05

Input Set : A:\A-579D.ST25.txt
Output Set: N:\CRF3\06032002\I728421C.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; Xaa Pos. 2,3,4,5,6,7,8,9,10,11,12,13,14,15,19,20,21,22,23,24,25,26
Seq#:5; Xaa Pos. 27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45
Seq#:5; Xaa Pos. 46,47,48,50,51,54,56,57,58,59,60,61,62,63,64,65,66,67,69
Seq#:5; Xaa Pos. 70,71,72,73,74,75,77,78,80,81,82,83,84,85,86,87,88,89,90
Seq#:5; Xaa Pos. 91,92,93,94,95,96,97,98,100,101,102,103,104,106,107,109
Seq#:5; Xaa Pos. 111,113,115,116,117,118,119,120,121,122,126,127,128,129
Seq#:5; Xaa Pos. 130,131,135,136,137,138,139,140,142,144,145,146,149,151
Seq#:5; Xaa Pos. 152,155,156,157,158,159,160,163,165,167,169,170,171,172
Seq#:5; Xaa Pos. 173,175,176,177,178,181,182,183,184,186,187,190,191,192
Seq#:5; Xaa Pos. 193,194,195,196,197,198,199,200,201,202,203,204,205,206
Seq#:5; Xaa Pos. 208,209,210,211,212,213,214,215,216,217,218,219,220,221
Seq#:5; Xaa Pos. 222,223,225,226,228,229,230,231,232,233,234
Seq#:10; Xaa Pos. 2,3,4,6,8,9,10,12,13,14,15,17,18,19,20,22,23,24,25,26,27
Seq#:10; Xaa Pos. 28,29,30,32,35,38,39,40,42,43,44,45,46,47,48,49,50,51,52
Seq#:10; Xaa Pos. 53,54,56,57,58,60,62,64,65,66,67,68,69,71,72,73,75,76,77
Seq#:10; Xaa Pos. 78,82,83,84,85,86,88,89,90,91,92,94,95,96,97,98,99,100
Seq#:10; Xaa Pos. 101,103,104,105,110,111,112,113,115,116,117,118,119,120
Seq#:10; Xaa Pos. 121,122,125,126,127,128,129,130,131,132,134,135,136,137
Seq#:10; Xaa Pos. 138,140,142,143,144,145,146,147,148,149,150,151,152,153
Seq#:10; Xaa Pos. 154,155,156,158,160,161,162,164,169,171,172,174,175,176
Seq#:10; Xaa Pos. 177,178,179,180,181,183,184,187,188,189,190,192,194,196
Seq#:10; Xaa Pos. 197,198,200,201,203,204,205,206,207,208,210,212,213,214
Seq#:10; Xaa Pos. 215,216,217,218,219,220,221,222,223,224,225,226,227,228
Seq#:10; Xaa Pos. 229,230,231,232,233,234,235,236,238,239,240,241,242,243
Seq#:10; Xaa Pos. 244,245,246,247,248,250,251,252,253,254,255,256,257,258
Seq#:10; Xaa Pos. 259,260,261,262,263,264,265,266,268,269,270,271,272,273
Seq#:10; Xaa Pos. 274,275,276,277,278,279,280,281,283,285,287,288,289,290
Seq#:10; Xaa Pos. 291,292,293,294,295,296,297,298,300,301,302,303,304,305
Seq#:10; Xaa Pos. 307,308,309,310,312,314,317,318,319,320,321,323,325,326
Seq#:10; Xaa Pos. 327
Seq#:15; Xaa Pos. 2,5,11,13,17,18,20,21,22,23,25,27,28,29,35,36,37,38,39,40
Seq#:15; Xaa Pos. 41,45,46,48,49,51,52,53,58,60,63,64,65,67,68,69,71,72,74
Seq#:15; Xaa Pos. 78,80,87,89,91,93,95,96,97,98,99,100,101,102,103,104,105
Seq#:15; Xaa Pos. 107,108,109,111,113,120,123,125,126,127,129,130,131,132
Seq#:15; Xaa Pos. 133,135,137,140,142,147,150,155,161,163,168,171,174,175
Seq#:15; Xaa Pos. 181,183,186,187,188,190,191,192,193,194,195,198,202,204
Seq#:15; Xaa Pos. 207,209,210,213,214,215,216,217,219,220,222,223,224,225
Seq#:15; Xaa Pos. 226,227,228,229,230,231,233,234,235,236,237,238,239,244
Seq#:15; Xaa Pos. 245,246,247,248,250,251,252,254,255,256,257,259,261,262
Seq#:15; Xaa Pos. 263,264,267,269,270,271,272,273,274,275,276,277,278,279
Seq#:15; Xaa Pos. 280
Seq#:20; Xaa Pos. 2,4,5,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24
Seq#:20; Xaa Pos. 25,26,27,28,29,32,35,38,42,44,45,46,48,51,57,59,63,64,66
Seq#:20; Xaa Pos. 67,68,69,71,73,74,75,81,82,83,84,85,86,87,91,92,94,95,97

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 06/03/2002
PATENT APPLICATION: US/09/728,421C TIME: 13:09:05

Input Set : A:\A-579D.ST25.txt
Output Set: N:\CRF3\06032002\I728421C.raw

Seq#:20; Xaa Pos. 98,99,104,106,109,110,111,113,114,115,117,118,120,124,126
Seq#:20; Xaa Pos. 133,135,137,139,141,142;143,144,145,146,147,148,149,150
Seq#:20; Xaa Pos. 151,153,154,155,157,159,166,169,171,172,173,175,176,177
Seq#:20; Xaa Pos. 178,179,181,183,186,188,193,196,201,207,209,214,217,220
Seq#:20; Xaa Pos. 221,227,229,232,233,234,236,237,238,239,240,241,244,248
Seq#:20; Xaa Pos. 250,253,255,256,259,260,261,262,263,265,266,267,269,270
Seq#:20; Xaa Pos. 271,272,273,274,275,276,277,278,280,281,282,283,284,285
Seq#:20; Xaa Pos. 286,291,292,293,294,295,297,298,299,301,302,303,304,306
Seq#:20; Xaa Pos. 308,309,310,311,314,316,317,318,320,321,323,324,327,329

Use of <220> Feature(NEW RULES):
Sequence(s) are missing the <220> Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or"Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104,pp.29631-32) (Sec.1.823 of new Rules)

Seq#:25,26,27,28,29,30,31,32,33,34,35

VERIFICATION SUMMARY DATE: 06/03/2002
PATENT APPLICATION: US/09/728,421C TIME: 13:09:05

Input Set : A:\A-579D.ST25.txt
Output Set: N:\CRF3\06032002\I728421C.raw

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:255 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:258 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:16
L:261 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:32
L:264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:48
L:267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:64
L:270 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:80
L:273 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:96
L:276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:112
L:279 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:128
L:282 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:144
L:285 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:160
L:288 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:176
L:291 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:192
L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:208
L:297 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:224
L:636 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:16
L:642 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:32
L:645 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:48
L:648 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:64
L:651 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:80
L:654 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:96
L:657 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:112
L:660 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:128
L:663 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:144
L:666 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:160
L:669 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:176
L:672 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:192
L:675 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:208
L:678 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:224
L:681 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:240
L:684 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:256
L:687 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:272
L:690 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:288
L:693 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:304
L:696 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:320
L:993 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:996 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:16
L:999 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:32
L:1002 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:48
L:1005 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:64
L:1008 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:80
L:1011 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:96
L:1014 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:112
L:1017 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:128
L:1020 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:144
L:1023 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:160

VERIFICATION SUMMARY DATE: 06/03/2002
PATENT APPLICATION: **US/09/728,421C** TIME: 13:09:05

Input Set : **A:\A-579D.ST25.txt**
Output Set: **N:\CRF3\06032002\I728421C.raw**

L:1026 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:176
L:1029 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:192
L:1032 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:208
L:1698 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1698 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1707 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1707 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1716 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1716 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1725 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1725 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1734 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1734 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1743 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1743 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1752 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1752 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1761 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1761 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1770 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1770 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1779 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1779 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:1788 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1788 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:

STATISTICS SUMMARY DATE: 06/03/2002
PATENT APPLICATION: **US/09/728,421C** TIME: 13:09:05

Input Set : **A:\A-579D.ST25.txt**
Output Set: **N:\CRF3\06032002\I728421C.raw**

Application Serial Number: US/09/728,421C
Alpha or Numeric: Numeric
Application Class:
Application File Date: 05-17-2002
Art Unit: OIPE
Software Application: PatentIN3.0
Total Number of Sequences: 35
Total Nucleotides: 5350
Total Amino Acids: 5093
Number of Errors: 0
Number of Warnings: 97
Number of Corrections: 1

MESSAGE SUMMARY

258 W: 22 (Mandatory Feature missing)
271 C: 1 (Current Filing Date differs)
341 W: 75 ((46) "n" or "Xaa" used)

Notic to Comply

Application N .	Applicant(s)	
09/728,421	YOSHINAGA, STEVEN K.	
Examiner	Art Unit	
Jessica H. Roark	1644	

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

☐ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If th ffective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (Jun 1, 1998) and 1211 OG 82 (June 23, 1998).

☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).

☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).

☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of th computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on th attached copy of the marked -up "Raw Sequence Listing."

☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must b submitted as required by 37 C.F.R. 1.825(d).

☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).

☐ 7. Other:

Applicant Must Provide:

☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".

☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.

☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216
For CRF Submission Help, call (703) 308-4212
PatentIn Software Program Support
Technical Assistance.....703-287-0200
To Purchase PatentIn Software.....703-306-2600

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR REPLY